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Availability and Acceptability as Factors in the Delivery of Rural Resource Teacher Service[1]

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This study examined the use of the Hurder model to evaluate resource teacher services to teachers and students in mainstreamed rural classrooms. Relationships between Access (availability), Disposition (acceptability), and Organization factors and the total amount of services provided by the service producer (resource teacher) to the consumer of services (classroom teachers) were analyzed using multiple regressions. The findings indicated relationships between Distance, Staff Ratio, Interpersonal Skills and Competence, and Rate of Service Delivery, providing support for the Hurder model and revealing important factors having a bearing on the provision of services to children with learning problems in rural areas.

While rural school systems have traditionally left mildly handicapped learners in regular classes, the progressive demands to expand these services and to serve the more severely handicapped necessitate improved responses to these needs. The onus for providing better services to children with learning difficulties will remain primarily on the regular classroom teacher in rural areas. What is needed, therefore, is an appropriate system of support to the regular classroom teacher in order to facilitate the best possible learning environment for the child and to optimally utilize the available resources. The resource teacher model, in theory, is able to provide this much needed support link in rural service delivery systems. A variety of resource teacher models are already being utilized in many rural school districts. This study describes some of these models and examines factors which influence their effectiveness in the delivery of services.

As a first step, the problem of a useful definition of rural is discussed, followed by a review of some of the more salient rural service delivery problems. Then the resource teacher model and some of its applications in rural areas are described.

The theoretical framework provided by the Hurder [12] model was used as a conceptual base from which to examine elements which influence the amount of services provided by a service producer (resource teacher) to a client or service consumer (classroom teacher). Elements which relate to the deliverability of services are Access, or availability of the service, Disposition, or acceptability of the service, and Organization, which is seen as an entity which encompasses and impinges upon both Access and Disposition factors. This conceptual base was used to examine the effectiveness of resource teacher service delivery in school districts in rural Quebec. The results of the study are then discussed.

Definition of Rural Applied to Education

The consolidation of school districts into increasingly larger units, and the increasing size of rural comprehensive secondary schools has obscured the notion of the "rural" school. Research has been hindered by a lack of a consistent definition of rural, and most federal agencies either have no definition or requirements for gathering data on rural areas, or they summarize the data with data from larger districts [9].

In the present study the term rural has been used to apply to small (under 250 students) elementary schools operated by school districts providing services to the English speaking minority in the Province of Quebec, Canada. The school districts concerned have fewer than 3000 elementary students each and are from a few miles to several hundred miles removed from the major population centre of Montreal.

Rural Special Education Delivery Problems

Special education in rural areas has been affected by recent national phenomena such as an increased awareness of the needs of exceptional children and the resulting law PL94-142. The growing popularity of mainstreaming also affects rural areas. However, the special problems of rural service delivery have received relatively little attention [8; 9]. Rural areas face constraints imposed by natural, geographic barriers, weather, and sparse or isolated populations. Added to these physical constraints are the problems of attracting and retaining highly skilled staff and other specialized resources. Further, in recent years there have been declining school enrollments. Although the costs of meeting the legislated requirements of providing for exceptional

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children are very high in rural areas, there is a lack of resources and little likelihood of substantial increases in the near future. Solutions to these problems are slow in evolving. Typically, inappropriate urban service delivery models have been recommended and implemented without success in rural areas. Equally unsuccessful have been the transfer of solutions from one rural area to another without the modifications which are required due to the differences between one rural system and another. There is no one typical rural model which fits the needs of all rural areas. Clearly, there is a need for further research in the delivery of services of all types, including special education services, to rural areas.

A number of studies during the 1970's and early 1980's have identified rural service delivery problems [1; 8; 18; 19; 24]. These studies cover a wide range of rural districts and focus on organizational problems, yet they concur on a number of specific problem areas, as does Helge's [9] follow-up to the 1978-82 National Rural Research Project (NRP) study. The NRP examined the application of PL94-142 in rural areas throughout the United States, and the follow-up survey enabled a comparison of recent data with those from the earlier investigations. Helge identified several major problems in serving rural handicapped students, namely, 1) funding inadequacies, 2) difficulties in recruiting and retaining qualified staff, 3) transportation inadequancies, 4) providing services to low incidence handicapped populations, and 5) the need for staff development, among others.

Resource Teacher Role and Competencies

Several models of resource teacher service delivery exist, and although the names attached to the various models differ slightly, many similarities can be seen. The concept is not a new one [5], and the remedial teacher of the sixties performed some of the functions of the resource teacher model being studied. The present importance of the resource teacher concept developed after the negative consequences of segregated special classes became apparent [28].

The resource teacher is a broadly-based, trained specialist with cross-categorical knowledge and competencies [7; 4] who deals directly with teachers in a consulting capacity and who may offer direct services to children, parents and others as well. Although some models may define consulting teacher and resource teacher differently, as used here the terms are interchangeable. The resource teacher may be attached to a separate resource room offering categorical, cross-categorical, or non-categorical services to a specific group of children for a given period of time, or the resource teacher may provide a specific skill resource program in core subjects [16, pp. 28-9; 4, p. 5). The resource teacher having a separate resource room may take referred children for as little as a few periods a week for an indefinite period of time, and the resource teacher who does not have access to a separate resource room may deal directly with the child in the regular classroom.

In all cases, the resource teacher offers some form of direct services to the child (diagnosis and assessment, instruction), consultation services to classroom teachers and others, and acts as a facilitator in bringing together all available resources in dealing with the child's learning problem. After the resource teacher provides direct services to the child, consultation with the teacher(s) provides an opportunity for the resource teacher and the regular class teacher to share updated information on the child's progress and changes in the child's behavior in the regular class. This interaction between the resource teacher and the regular class teacher is important in providing monitoring of the child's progress and in adopting appropriate program modifications as soon as significant behavior changes are noted. The resource teacher plays an important role in ensuring that various people dealing with the child are coordinated in their efforts to provide educational and related services. A great deal of role flexibility is needed, but at the same time the resource teacher must frequently act as a trained specialist to detect certain specific needs the child may have and bring appropriate system resources to bear on the child's problem.

A note of clarification may be useful, given the wide variety of situations in which the terms "resource teacher" and "resource room" are used. In this study, the resource teacher is not merely another term for a special education teacher in a segregated classroom, although a resource teacher may at times have such a room as a base for activities. Nor is "resource teacher" synonymous with "resource room." It is essential to note that the resource teacher model in this study provides assessment, programming and consultation services to children, to teachers, and to administrative and professional personnel throughout the school(s) served.

The competencies of resource teachers are comprised of two broad kinds of skills: 1) interpersonal relations, and 2) diagnostic/prescriptive knowledge and techniques. Both are essential to their consulting role. The resource teacher's demonstrated competencies in professional skills has been shown to be a crucial factor in inspiring the confidence of regular classroom teachers [20]. Unless a classroom teacher has confidence in the resource teacher's ability to understand and deal with the problems presented by exceptional children, there can be no basis for a good, mutually-supportive consulting relationship between the two. When a supportive relationship does exist, however, the resource teacher can play an important role in inservice training of regular teachers as well as in expertise in diagnosis and programming skills which an individual teacher may lack.

A number of resource teacher programs in rural areas of the United States and Canada have been adequately reported elsewhere. The programs in Vermont [6], Nebraska [1], New Mexico [27], North Dakota [21], and Saskatchewan [16] are among the more prominent examples.

THEORETICAL FRAMEWORK

Most writing on the topic of service delivery tends to be practical and developmental rather than theoretical.

One conceptually simple model is the triad model developed by Tharp and Wetzel [25] which suggests that an expert can deliver services to a large number of individuals through the intermediary of a trained person. This model is enhanced and adapted in the various resource teacher models described above and others reviewed by Heron and Harris [10]. The main distinctions between the triad model and the resource teachers model are related to the roles of the key actors. In the resource model the classroom teacher is not an intermediary, but the person responsible for the total service delivered to the child. The child is not necessarily the client of the resource teacher; the resource teacher attempts to meet the needs of the teacher as the teacher provides services to the students. However, there are few complete, sophisticated service delivery models available which can guide administrators of special education services in the implementation and management of these service programs. One model was developed by the late Paul Hurder during his tenure as Director of the Institute for Research on Exceptional Children at the University of Illinois. His unpublished works describe a theoretical framework for the development, analysis and evaluation of service delivery in the fields of health, education and social services [11; 12; 13]. In this section, Hurder's model will be elaborated and applied to the task of evaluating resource teacher services in rural areas.

The Hurder Model

The key element in Hurder's model is the transformation of a service from a *potential* state, where a service is potentially available to a client, to an *actual* state, where the service is actively received by a client [11; p. 2]. A service is not considered to be delivered until it has been accepted by the consumer.

Service development usually begins with administrative and programmatic activities. At the policy and executive levels of an organization, decisions are made to make services available, rules are established concerning such matters as eligibility and methods of service provision, staff are hired and resources are allocated. Meanwhile, program experts design the service programs, prepare manuals to guide service providers and prepare the staff to deliver the service. These activities make a service available to a category or class of consumers [11].

At the consumer level, services are brought to a client through a variety of prescriptive and clinical processes. Such processes are usually on the basis of one service provided to one (or a small group) of clients. The client's needs are assessed and a service is offered. There is normally a significant degree of interaction between the client and the service provider in the final phase of service delivery.

The administrative and programmatic dimensions of service delivery are not independent of the clinical and prescriptive ones. Both are necessary. There is continual interaction between them.

Access Variables. Service delivery is influenced by a set of Access variables, which may be either administrative or clinical. They include such variables as the *availability* and *continuity* of programs, *provider-client ratio, time lag* between a request for a service and actual receipt of a service, *distance* of client from the provider, and *geographical area* served by a provider. In the rural school as elsewhere many exceptional children require a sustained, integrated and comprehensive set of services. The organizational knowledge for delivering such services tends to be fragmentary and unsatisfactory [13, pp. 18-24]. The Access variables listed here represent continuing problems in serving rural children.

Dispositional Variables. Service delivery is also affected by a set of Disposition variables which center on the *interpersonal skills* and *perceived competence* of key actors. These variables influence one's disposition to accept a service or to provide a service to one particular client.

The competence of resource teachers in relation to two components which Hurder believed to be crucial to optimal service delivery are: *specialized knowledge,* and *specialized personnel.* The model suggests alternative ways of providing specialized knowledge and personnel to meet the needs of clients which range from the costly option of providing expert, highly trained practitioners for every client, to the less costly option based on approaches such as the resource teacher model or the triad model. If the resource teacher model is selected, then the professional competence of the teacher becomes crucial.

Organization. The final component, Organization, is the means of placing knowledge and personnel at the client's disposal. Organization is both a structure and a process. The set of Organization variables cut across administrative/programmatic and clinical/prescriptive dimensions and Access and Disposition variables. Although less well-defined and less researched than the above components of the model, Organization variables seemingly include the commitment of key administrators to a program, the provision of appropriate resources and support units and related factors. These are generally district-level variables. Since in this study there are only 5 resource teachers to assess 4 districts, it will not be appropriate to include all of these variables in certain of the statistical tests of the data.

Evaluation. The evaluation of service delivery, according to the model, must focus equally on the administrative/programmatic dimensions whereby service systems are developed and on the clinical/prescriptive dimensions where the services are delivered. The major set of evaluation criteria are Access criteria and Disposition criteria. Appropriate assessment of Organization factors will depend on the nature of the services provided, the goals to be pursued, and the setting. In terms of educational services in rural settings, evaluation models must be sensitive to the latter elements of the cultural and geographic settings of the communities where services are to be provided. Studies by Sanche [23], Pyrch [22] and Otuyelu [20], among others, have used the Hurder model to evaluate educational service delivery in rural settings and have found support for various elements of this model.

RESEARCH METHODS

Statement of the Problem

The primary purpose of the study was to examine the factors which influenced the effectiveness of the delivery of services by resource teachers in rural areas of Quebec. A secondary major interest of the study was to assess the utility of the Hurder model as a theoretical paradigm for studying the administration and evaluation of special education services.

More specifically, the study addressed the following questions:

1) *Access variables*: Do rural classroom teachers perceive that they receive more services from resource teachers when the distance from their location to that of the resource teacher is less, where the resource teacher has fewer teachers to serve, and where that resource teacher is able to respond more quickly to service requests?

2) *Disposition variables*: Do rural classroom teachers perceive that they receive more services from resource teachers whom they rate as more personable and more competent?

3) *Organization variables*: Do rural classroom teachers perceive that they receive more services from resource teachers in instances where selected Organization factors are more favorable?

Further, since the relationship between the classroom teacher and the resource teacher is interactive, these same questions were examined from the perspective of the resource teacher.

Sample and Population

Lack of variability in the samples, administratively equalized staff ratios, and other methodological problems had been cited as likely reasons for a lack of substantial support for the theoretical link between Access factors such as Distance and Staff Ratio and service delivery in earlier studies [20; 22; 23]. Thus, this study selected a large jurisdiction, the Province of Quebec, Canada, in which a provincial ministry of education provides services through 9 regional offices which offer liaison and administrative support for a number of regional and local school boards, identified on a confessional basis as Roman Catholic or Protestant boards for instructional purposes.

Four of the five Protestant school boards in rural Quebec which employed resource teachers were selected for the study. None of the selected elementary schools had more than 250 students. Two of the resource teachers were school based and three were itinerant. In the case of the itinerant resource teachers, two of them served in excess of 50 teachers each. In those two cases, certain schools were selected by the special education administrator, taking into account the amount of time needed for the study, constraints imposed by the teacher union and school board relations in the wake of a particularly difficult period of labour negotiations and other practical considerations.

TABLE 1

Data Collection Instrument (DCI) List
Showing Section and Item Content

Interpersonal/Personal
(Part I, Forms A and B)

1. Receptive Communication
2. Expressive Communication
3. Sensitivity
4. Receptivity to Change
5. Flexibility
6. Self Confidence
7. Reliability
8. Initiative
9. Enthusiasm
10. Creativity

Organization of Programs Services for Children with Learning Difficulties
(Part III, Form A; Part IV, Form B)

1. Resource Teacher Role
2. Mainstreaming
3. Support Services (Psychologist, etc.)
4. Administrative Support, School Level
5. Administrative Support, District Level

Service Delivery
(Part IV, Form A; Part III, Form B)

1. Service to Teachers
2. Service to Children
3. Service Delivery Time Lag

Competence in knowledge areas and performance of specific tasks
(Part II, Forms A and B)

1. Teaching Special Skills
2. Curriculum Development, Children with Learning Difficulties
3. Child Develoment, General
4. Psycho-Social Development, Children with Learning Difficulties
5. Diagnosis and Assessment of Learning Problems
6. Remediation of Emotional Problems
7. Remediation of Learning Problems
8. Planning
9. Thoroughness
10. Communication, Organizational
11. Program Evaluation
12. Community Relationships
13. Parent Relationships
14. Classroom Observation Activities
15. Consultations with Teachers/Resource Teacher

Availability
(Part II, Item 26, Forms A and B)

Seventy-two classroom teachers received services from the 5 resource teachers, thus there were 72 possible classroom teacher ratings of resource teachers and 72 possible resource teacher ratings of classroom teachers. Five resource teachers provided the 72 ratings of the classroom teachers, however it was assumed nonetheless that resource teachers, who worked closely with the classroom teachers, were able to rate them independently, thus providing for 72 independent resource teacher ratings of classroom teachers.

Of the 72 classroom teachers who received questionnaires, only 55 returned complete sets of data. In this article, only the data from that set of 55 teachers are analyzed.

Data Collection

The Data Collection Instrument (or, DCI) used in the present study is a four part questionnaire in which form A is provided for classroom teachers to rate their resource teacher and form B for resource teachers to rate the classroom teachers they serve [14, pp. 110-137]. The DCI measures the respondent's perception of the other's skill in interpersonal relations, competence and knowledge related to children with learning difficulties, estimates of the amount of services delivered and the time lag between service request and delivery, and the presence of selected organizational factors.

Table 1 shows the composition of the DCI by section and item content. With the exception of items dealing with selected Organization factors, the DCI was adapted with few modifications from earlier instruments [22; 23; 26] having reliability within acceptable limits [14, p. 65]. The Organization items reflect factors suggested by earlier investigators [22; 16] as important in rural resource teacher service delivery.

The criterion variable was the perceived Rate of Service Delivery and was defined as the total of all professional interactions including services both to teachers and to students over the period of one year. The mean rate of services delivered as perceived by the classroom teachers (33.11) is very close to the rate perceived by the resource teachers themselves (35.86), with slightly more than half of the services provided to teachers and the remainder to children. The services were distributed evenly throughout the school year. One of the resource teachers was able to provide data concerning the number of referrals and the time taken to respond to the request from a log which had been kept for better coordination of the process. The log confirmed the perceptual data submitted by that resource teacher. This reference to factual data and the close agreement between classroom teachers and resource teachers on the perceived amount of services provided lend additional support to its use as the criterion variable.

The Access variables, Distance and Staff Ratio, were obtained from the central office of each school district. Other Access variables, Time Lag and Availability, were obtained in responses to the DCI and represent perceptual data. Data concerning the number of specialists in the pupil personnel services (PPS) staff were obtained from the central offices of the school districts concerned and were used to further examine the relationship between this Organization factor and the criterion variable.

Validity and Reliability of the Instrument

Content validity of the DCI was assumed after preliminary versions were submitted for critical review and suggestions to knowledgeable educators and teachers having broad experience in rural service delivery. Construct validity stems from the work of Thomure [26], Sanche [23], Pyrch [22] and from the present study and is evidenced by the fact that the theoretical bases of the studies cited have been supported through use of the instrument.

To estimate the reliability of the scales used in the present study, Spearman-Brown split-half co-efficients were computed for both forms of the DCI. The results are mostly within reasonable limits and closely resemble the findings of earlier studies. Parts I and II of the DCI had co-efficients of reliability ranging from .86 to .92. Part III of form A and Part IV of form B represent items not covered by the earlier investigators. The co-efficient of reliability for Part III of form A was .80. It was not appropriate to test for the internal consistency of the resource teacher data.

RESULTS AND DISCUSSION

According to Hurder [12] service delivery is influenced by Access, Disposition and Organization variables, and the correlational analysis of the data examined these theoretical links. The results of this analysis within the perceptual fields of the classroom teachers and the resource teachers are presented in Table 2.

Access

The first question dealt with whether a higher Rate of Service Delivery is found in the presence of more favorable Access to services, namely, where distance between classroom teachers and the resource teacher was less, where the resource teacher had fewer teachers to serve and where the lapse in time between service request and its delivery was less.

Distance was defined as the time required to travel between the resource teacher's principle office and the school concerned and was ranked in four categories: 1) school based; 2) less than 1 hour travel required; 3) 2-4 hours travel required; and 4) more than 4 hours travel required. Thirty-two per cent of the cases fell into the first category, 55% fell into the second category and 13% fell into the third category. No cases fell in the fourth category.

The obtained Pearson product-moment correlation for the classroom teachers ($r = .38$) and the correlation for the resource teachers ($r = .52$) indicated a significant relationship between Distance and the perceived Rate of Service Delivery. Where distance was greater, the classroom teachers as well as the resource teachers estimated that

TABLE 2

Correlations Between Rate of Service Delivery and Access, Disposition and Organization Variables for Classroom and Resource Teachers

Variables	Classroom Teachers (n = 55)	Resource Teachers (n = 72)
ACCESS		
Staff Ratio	.50**	.72**
Distance	−.38**	−.52**
Time Lag	−.11	−.15
Availability	.28*	.31**
DISPOSITION		
Interpersonal Skills	.37**	.31**
Competence	.42**	.18
ORGANIZATION		
Role of Resource Teacher as Support to Class Teacher	43**	n.a.
Mainstreaming as System Objective	.30*	n.a.
Central Support Services	−.08	n.a.
Support of School Principal	.19	n.a.
Support of Chief Administrator	.20	n.a.

*($p<.05$), **($p<.01$), n.a. = not applicable

fewer services were provided by the resource teacher.

This result lent support to the Hurder model where earlier studies [20; 22; 23] had failed to obtain significant findings. In this study, the wider dispersal of resource teachers and classroom teachers provided a better test of the hypothesis concerning the Distance variable.

As the ratio of resource teachers to classroom teachers increased, the Rate of Service Delivery was also seen to increase, by the classroom teachers ($r = .50$), and by the resource teachers ($r = .72$), concurring with earlier findings [20; 23]. Where resource teachers have a greater number of teachers to serve, they are seen to provide fewer services.

As the lapse in time increased between a request for service and its delivery, the perceived Rate of Service Delivery was thought to decrease. This Time Lag was ranked in four intervals, from less than a day to more than 20 days. The obtained correlations ($r = -.11$, $r = -.15$, for classroom teachers and for resource teachers respectively) were not significant at the .05 level. Sanche [23] and Pyrch [22] obtained similar results.

Finally, the greater the extent to which the resource teacher was seen to be available by the classroom teacher, the greater was the perceived Rate of Service Delivery ($r = .28$). In the same way, resource teachers perceived that they provided more services to classroom teachers

TABLE 3

Multiple Regression Analysis for the Criterion Total Service Delivery: Classroom Teacher Data

RSQ = 0.32 $F = 12.04$ $df = 2,52$ $p < .0001$

Predictors	r	Beta Weight	Standard Error	F	p
Staff Ratio	.50	455.34	138.23	10.85	.00
Competence	.42	1.27	0.54	5.58	.02
(constant)		−105.42			

whom they saw as being available when needed ($r = .31$). Thus the link between objectively observable Access factors (Distance and Staff Ratio) as well as perceived Access (Availability) and the Rate of Service Delivery has been supported.

Disposition

The second question dealt with whether service delivery is enhanced by the perception on the part of either the classroom teacher or the resource teacher that the other is personable. The results indicated that both the classroom teachers ($r = .37$) and the resource teachers ($r = .31$) perceive a greater Rate of Service Delivery where they see the other as having better interpersonal skills. This finding supports Hurder's contention that service delivery requires the consensus of both parties to the consultative process, the attitudes of each toward the other having an impact on the services which will ultimately be delivered. A similar finding was reported by Otuyelu [20].

With respect to demonstrated knowledge and competence in dealing with children with learning difficulties, classroom teachers perceived a greater Rate of Service Delivery from resource teachers whom they saw as being more competent ($r = .42$), whereas the resource teachers themselves did not perceive a greater rate of services delivered where they felt the classroom teachers were more competent. One of the major functions of the resource teacher is to provide support and training to the classroom teacher, and this finding suggests that the resource teacher is not hindered by a perception that the classroom teacher may be less competent in dealing with children with learning difficulties.

Organization

The third question dealt with the relationships between general Organization factors which are not easily classified under the headings of Access or Disposition. These factors are the extent to which the role of the resource teacher is seen as a support to the classroom teacher, the support given by the school principal to the resource teacher program, and the extent of the support provided by the educational system as a whole. Included

in the latter are the extent to which "mainstreaming" is an important system objective, the availability of central support services, and the support of the senior administrator for the resource teacher program.

For the classroom teachers, there is a tendency for the above set of Organization variables to be associated with service delivery (Table 2). Two variables are related to total service delivery: the perception that the resource teacher role is to support classroom teachers ($r = .43$), and the perception that the system endorses mainstreaming ($r = .30$).

The resource teachers, as they responded to the questionnaires with respect to each classroom teacher in the sample, in effect rated a limited number of school principals, and only 4 districts and district administrators. For most of the items in the Organization category, resource teachers clustered their responses in categories 6 or 7 on a seven-point scale. However, there was a spread of scores for item 3, "The school principal supports the resource teacher program". The correlation between this score and the total service delivery score is positive. Resource teachers tend to provide more services in schools where the principal supports the program.

Regression Analysis

Since many of the factors in the Hurder model are interrelated, it was decided to subject the data to multiple regression analysis for a more parsimonious interpretation of the data.

In accordance with the suggestions of Darlington [3], all factors which are negatively correlated with the criterion of total service delivery score were re-scored in the opposite direction. These are Distance and Time Lag.

For the classroom teacher data, the value of the multiple correlation coefficient squared or R-squared is .32 ($p < .001$). Only two predictors have statistically significant regression coefficients or beta weights, Competence and Staff Ratio. That is, approximately 32% of the variance in the total service delivery scores is associated with the classroom teachers' perception of the resource teacher's Competence and with the Staff Ratio, taken together. If all the Disposition, Access and Organization variables were added to the equation, the value of the R-Squared would only increase to .34. Service delivery increases where resource teachers are seen as more competent and where there are larger ratios (fewer classroom teachers per resource teacher). This does not suggest that these are the only important factors. Among Disposition factors, Interpersonal Skills is associated both with Competence ($r = .85$) and with Rate of Service Delivery ($r = .37$); among Access variables, Staff Ratio is associated with Time Lag ($r = .44$), Distance ($r = -.70$), and Availability ($r = .36$) and these variables are in turn correlated with Rate of Service Delivery. The regression model selects only those predictors which produce the largest possible correlation coefficient and omits those variables whose predictive powers are not additive to those of the selected variables. The data for the analysis is shown in Table 3. In summary, it shows that from the classroom teachers' point of view, service delivery is associated with access (Staff Ratio) of competent resource teachers. Organizational variables do not add significantly to the regression coefficient.

TABLE 4

Multiple Regression Analysis for the Criterion Total Service Delivery: Resource Teacher Data

RSQ = 0.54	$F = 40.95$		$df = 2,69$	$p < .0001$
Predictors	r	Beta Weight	Standard Error	F	p
Staff Ratio	.72	591.78	71.85	67.83	.00
Availability	.31	3.77	2.06	3.35	.07
(constant)		− 15.18			

The data for the resource teachers show that Staff Ratio is still the major factor in service delivery. The value of the R-Squared is .54, which is significant at the .0001 level. The second element in the equation is the variable Availability, which is a measure of the resource teacher's perception that the classroom teacher is available for consultation. If all the Disposition and Access variables are entered into the regression equation, the value of the R-Squared would only increase to .56. As with the classroom teacher data set, Staff Ratio is correlated with the Access variables of Distance ($r = -.70$), Time Lag ($r = .26$) and Availability ($r = .22$). Availability can also be considered as a Disposition variable. The correlations between Availability and the two Disposition variables, Performance and Interpersonal Skills, are .68 and .69 respectively. Thus for resource teachers, the Rate of Service Delivery is primarily related to Access variables and secondly to Disposition variables. The Organization variables were not included in the discussion for the reasons given above.

Conclusions

In general these findings provide support for all elements of the Hurder [12] model. In the case of Access variables the link with service delivery is now clear, whereas earlier studies found only partial support for the relationship. In the case of Disposition variables these findings provide additional confirmation for the relationship already elaborated in earlier studies. Since the study included teachers from only 4 districts, our findings with respect to the Organization variable must be treated with caution. While the data tend to support the relationships posited by the model, they also suggest that the Organization variable consists of a complex array of factors for which the present study provides only an exploratory analysis.

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